

Patent Claims

1. Mobile concrete pump with a structural frame (14) mounted on a truck undercarriage (10) of a truck chassis (12), supportable upon the ground upon lifting of the truck undercarriage, with a boom stand (22) rotatable about a vertical axis (20) and provided upon the structural frame (14) and with a concrete distribution boom (24) in the form of a multi-arm articulated boom, including a first boom arm (1) pivotable relative to the boom stand (22) via a first articulation linkage (A) with horizontal articulation axis and further boom arms (2 through 7) pivotable relative to each other via articulation linkages (B-G) about horizontal articulation axis, characterized by a trailer (32) connectable with the truck undercarriage (10) via a coupling member (36) when in the transport configuration, the trailer including a pivot mount (40) rotatable about a vertical axis for receiving the set of arms projecting beyond the end of the truck undercarriage (10) in the travel configuration, in which a second boom arm (2) folded out relative to the first boom arm (1) in the extended position of the second articulation linkage (B) and at least some of the remaining boom arms (3 through 7) configured in the folded configuration together with the first boom arm (1) form the coupling arm (36).
2. Mobile concrete pump according to Claim 1, thereby characterized, that the vertical axis (20, 38) of the boom stand (22) and the pivot mount (40) form the free rotation axis of the coupling arm (36) in the transport configuration.

3. Mobile concrete pump according to Claim 1 or 2, thereby characterized, that in the transport configuration the first articulation linkage (A) between boom stand (22) and first boom arm (1) is locked in its position facing backwards counter to the direction of travel of the truck undercarriage (10).
4. Mobile concrete pump according to one of Claims 1 through 3, thereby characterized, that the second articulation linkage (B) is freely pivotable about its articulation axis when in the travel configuration.
5. Mobile concrete pump according to one of Claims 1 through 4, thereby characterized, that the pivot mount (40) is limitedly pivotable about an axis (46) running transverse to the trailer longitudinal axis.
6. Mobile concrete pump according to one of Claims 1 through 5, thereby characterized, that the pivot mount (40) is rotatable about the vertical axis (38) of the trailer (32).
7. Mobile concrete pump according to one of Claims 1 through 6, thereby characterized, that the trailer (32) is coupleable with the truck undercarriage (10) via a, preferably telescopic, tow bar.
8. Mobile concrete pump according to one of Claims 1 through 5, thereby characterized, that the trailer (32) is self-steering.

9. Mobile concrete pump according to one of Claims 1 through 6, thereby characterized, that the trailer (32) includes at least two, preferably hydraulically, coupled steering wheels (50).
10. Mobile concrete pump according to Claim 8, thereby characterized, that the trailer (32) includes a steering device coupled electronically with a steering device of the truck undercarriage (10).
11. Mobile concrete pump according to one of Claims 1 through 10, thereby characterized, that the trailer (32) includes a motorized wheel drive.
12. Mobile concrete pump according to one of Claims 1 through 11, thereby characterized, that the trailer (32) in the decoupled condition is drivable unto or liftable with the truck undercarriage (10) as ballast.
13. Mobile concrete pump according to one of Claims 1 through 12, thereby characterized, that the trailer (32) carries a pump unit (26) with material supply container (38), which in the operating condition is connectable on the outlet side with a conveyor line provided on the distribution boom.
14. Mobile concrete pump according to one of Claims 1 through 12, thereby characterized, that the truck undercarriage side structural frame (14) carries a pump unit (26) with material supply container (28), which on its outlet side is

connectable with a conveyor line (30) provided on the distribution boom.

15. Mobile concrete pump according to one of Claims 1 through 14, thereby characterized, that the boom arms (1 through 7) of the distribution boom (24) are connected with each other in a combined ZRZ- or RZRZ-fold.
16. Mobile concrete pump according to one of Claims 1 through 15, thereby characterized, that the distribution boom (24) is at least four arm, preferably six or seven arm.
17. Mobile concrete pump according to one of Claims 1 through 16, thereby characterized, that the set of arms (42), when in the travel configuration, are bolted with the pivot mount (40) of the trailer (32).
18. Mobile concrete pump according to one of Claims 1 through 17, thereby characterized, that a set of arms comprised of all boom arms (1 through 7) is supportable upon the truck undercarriage (10) in the folded-in configuration to form a construction site transport configuration.
19. Mobile concrete pump according to one of Claims 1 through 18, thereby characterized, that the trailer (32) is at least a two axle trailer.
20. Mobile concrete pump according to Claim 19, thereby characterized, that the trailer (32) is a three to five axle trailer.

21. Mobile concrete pump according to one of Claims 1 through 20, thereby characterized, that at least one of the remaining boom arms (6) in the travel configuration lies upon the truck undercarriage side structural frame or on the first boom arm.
22. Mobile concrete pump according to Claim 21, thereby characterized, that in the transport configuration the last boom arm (6) of a six arm concrete distribution boom (24) is folded out from the set of arms (42) in the direction of the truck undercarriage (10) and lies thereupon together with the first boom arm (1).